

302 *Mr. Stone, Dimensions of Seventy-one Asteroids.*

Hence, combining the observations of the two years, we have for the resulting longitude,

$$\begin{array}{l} \text{h} \quad \text{m} \quad \text{s} \\ 10 \quad 4 \quad 45 \cdot 39 \text{ from observations of first limb.} \\ 10 \quad 4 \quad 49 \cdot 26 \text{ from observations of second limb.} \end{array}$$

or, as the final result,

$$10 \quad 4 \quad 47 \cdot 32.$$

Approximate relative Dimensions of Seventy-one of the Asteroids. By E. J. Stone, Esq.

In the Supplement to the *Nautical Almanac* for the year 1868 will be found the mean opposition magnitudes of 71 of the asteroids. A considerable number of them have been determined by Mr. Pogson and may be considered entitled to great confidence. If we assume that the surfaces of the asteroids have equal reflective powers, we can, from these opposition magnitudes and the semi-axes major of the orbits, determine the relative dimensions of the mean reflecting surfaces of the asteroids. The relative diameters thus calculated are given in the following table. To turn the results into miles I have adopted diameters of *Ceres* and *Pallas* from the observations of Sir W. Herschel and Lamont.

Since the completion of these results I have found that the dimensions of the first 39 have been computed, from different data, by Dr. Bruhns, *De Planetis Minoribus*.

Name of Asteroid.	Diameter in Miles.	Name of Asteroid.	Diameter in Miles.
1. Ceres ...	196	16. Psyche ...	75
2. Pallas ...	171	17. Thetis ...	50
3. Juno ...	124	18. Melpomene ...	51
4. Vesta ...	214	19. Fortuna ...	56
5. Astrea ...	57	20. Massilia ...	65
6. Hebe ...	92	21. Lutetia ...	39
7. Iris ...	88	22. Calliope ...	78
8. Flora ...	61	23. Thalia ...	47
9. Melio ...	76	24. Themis ...	24
10. Hygeia ...	103	25. Phocea ...	36
11. Parthenope ...	63	26. Proserpine ...	44
12. Victoria ...	51	27. Euterpe ...	50
13. Egeria ...	60	28. Bellona ...	65
14. Irene ...	65	29. Amphitrite ...	83
15. Eunomia ...	92	30. Urania ...	44

Name of Asteroid.	Diameter in Miles.	Name of Asteroid.	Diameter in Miles.
31. Euphrosyne	... 46	52. Europa	... 72
32. Pomona	... 42	53. Calypso	... 29
33. Polyhymnia	... 36	54. Alexandra	... 40
34. Circe	... 29	55. Pandora	... 44
35. Leucothea	... 31	56. Melete	... 29
36. Atalanta	... 18	57. Mnemosyne	... 63
37. Fides	... 47	58. Concordia	... 31
38. Leda	... 40	59. Olympia	... 36
39. Lætitia	... 90	60. Echo	... 17
40. Harmonia	... 61	61. Danaë	... 38
41. Daphne	... 61	62. Erato	... 40
42. Isis	... 39	63. Ausonia	... 49
43. Ariadne	... 33	64. Angelina	... 44
44. Nysa	... 42	65. Maximiliana	... 63
45. Eugenia	... 44	66. Maia	... 18
46. Hestia	... 25	67. Asia	... 22
47. Aglaia	... 43	68. Leto	... 60
48. Doris	... 57	69. Hesperia	... 32
49. Palis	... 61	70. Panopia	... 36
50. Virginia	... 25	71. Niobe	... 46
51. Nemausa	... 38		

On the Lunar Crater Linné.

(Extract from a Letter from Prof. Mädler to Mr. Birt.)

"A few months ago I was honoured with a letter of yours, and now having looked over my original manuscripts respecting the Moon's surface, I take the liberty to answer.

"The Crater *Linné*, situated in $+ 27^{\circ} 47' 13''$ N.L. and $+ 11^{\circ} 32' 28''$ W.L. has a diameter of 1.4 geographical miles. In full moon, the edge of it is not very sharply limited, but in oblique illumination it is very distinct, and I have measured it seven times with great facility. The light of the edge is noted permanently 6° , the very small inner space has nearly or full the same brightness till the moment when shadows begin. I measured its co-ordinates, 1831 Dec. 12, five times, and Dec. 13, two times.

"Bonn, June 6, 1867."

Erratum in the Astronomer Royal's "Undulatory Theory. Macmillan and Co., 1866." By E. J. Stone, Esq.

On page 80 line 4, for "Let this angular diameter in seconds be *s*" read "Let this angular *semi-diameter* in seconds be *s*."